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Building

The invention relates to a building from timber material, in particular from timber material plates.

The GB 2,287,047 A shows a building of the genus initially specified from plates from timber material, z. B particle boards, whereby the outer walls, which are inner walls and the ceiling plates clam-shell formed and are between the single shells of the plates of cavities provided. With the GB 2,287,047 A the more-shelled plates, of which the building consists, become only locally, thus assembled with establishing the building from single plates and spacer elements.

From the FR 2,194,145 A it is known to lead through in plates for buildings planned cavities installations.

The invention is the basis the object, a building, in particular a house will make, the free available planned can and exclusive or at least far predominant from timber material plates, in particular particle boards, exists.

Dissolved one becomes this object with a building, which exhibits the features of the claim 1.



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Preferred ones and advantageous embodiments of the building according to invention are Gegenstand' der of Unteransprüche.

Since the building according to invention consists of particle boards, it can become free planned, and in particular, if in accordance with a proposal of the invention the timber

material plates in at least a direction of the outer walls, the inner walls, the ceilings and/or the roof integral continuous formed is.

To plan the inventive concept allowed it also the building using Internet, as entered over a corresponding Internet side ("homepage") of a prospective customer the desires become concerning design and size of the house. In case of a placing of order the so calculated data immediate can be used for heading for the plants of the manufacturer of the timber material plates.

The plates according to invention, of which the building consists, are at least clam-shell formed, whereby between the shells formed by plates by Distsanzelemente, like spacer strips or distance blocks defined cavities are present, in those z. B. Installations housed to become to be able. The cavities in the plates can be consulted also for a warm air heating or for a cooling of the building. The other the cavity in the plates, of which the house consists, can become filled, in order to adapt the insulating properties, in particular the noise control characteristics of the plates, to the respective need. The cavities in the plates, from which erfin would dung-in accordance with-eat building exists, can be with actual beliebigern materials filled. The material, which in the plates if necessary is contained (or only filled one becomes, after the plates to one whole or partial finished buildings composite are) can also so selected become (z. B. Concrete, lightweight concrete etc.) that a building ent stands, which is at least partial than solid buildings formed.

With advantage those are the circumscribed space course-turned inner surfaces of the plates so far finished with the building according to invention that they can be painted or tapeziert more immediate. This becomes in particular possible by the use of particle boards, which extremely small Quell-und shrinking behavior exhibits, so that her very precise processed to become to be able. Therefore inside finished, self-supporting walls with integrated cavities, if necessary with installations contained in it such as sanitary, can already become Elektro-und ventilation installations prefabricated and for the order provided.

With the building according to invention the possibility exists to connect the cavities into that the walls (inner walls and outer walls) for formed plates with the cavities into that the ceilings and/or the roof formed plates so that an entire heating is or cooling of the building and thus a particularly uniform room temperature possible. This opens also the possibility to air-condition the building without special effort as the cavities become connected to an air conditioner. The heating of the building for example a air-warm pump can become used.

On the outer surfaces of the outer walls an insulation and an outer finery can become applied. The roof members can be provided with a übichen covering.

Particularly preferred is in the scope of the invention Holzspanplat ten.

Preferred ones are thereby particle boards in the form of from prolonged, slender, aligned wood chips with predetermined shape and thickness and a bonding agent made multi-layer plates. The wood chips in the outer layers are parallel aligned or-wide to the diskprolonged; the wood chips in the middle layer can be random arranged or are generally rectangular to the wood chips of the outer layer aligned. The flat splinters used for the production of such plates have generally a length of approximately 60 mm, a width of 35 mm and a thickness of 0.6 mm. By the Zerspanprozess as well as due to the other processing (drying process, sieving, Trans haben, Beleimung, scattering) it comes however to damages of the chips (splinter breaks, distortions, rolling, kinks up of the chips), which cause relative large fineness (small, not definable splinter geometry) of the splinter material. The chips of the covering layers exhibit, since a part of the fine material can be sifted out again, usually smaller fineness than those chips of the middle layers.

For the invention also particle boards can become from prolonged, slender, aligned wood chips with predetermined shape and thickness, which are connected with a bonding agent to an a layer plate, used. The orientation of the wood chips is essentially uniform over the whole thickness of the plates. A transversestrewn middle layer is not provided.

The spacer elements (strips or blocks) can consist of timber material and be for example corresponding dimensioned particle boards. This opens the possibility to already manufacture the timber material plates in each case in the manufacture work of the plates in that required size and with the required edge training. Such particle boards are sufficient stable, so that they are sufficient also for the static requirements of the building, without additional measures are required.

For inner walls preferred timber material plates become from two particle boards also arranged between them, the plates from each other dissociating and the cavities between the plates defining strips or blocks manufactured, whereby the plates with the spacer elements connected, especially glued are, used.

As outer walls timber material plates used become, the z. B. at their the circumscribed space course-turned (interior) side a single plate, for example a particle board, and at their outside two immediate with one another connected, z. B. glued plates, preferably particle boards, possess, whereby the single plate and the double plate are connected with one another over the spacer elements (blocks or strips).

For the decks and the roof timber material plates used can become, outer a plate, preferably a particle board, with those inside and, provided in each case are, which by thicker spacer elements or multi-layer spacer elements glues with one another in the form of blocks or strips on distance connected, for example, are.

For multi-storey buildings the inner walls and/or outer walls formed plates with horizontal

shock can be added together, so that in horizontal direction continuous inner walls or outer walls are formed.

The ceiling components and/or roof members go likewise into at least a direction through and for example coupled with one another become over hook-like Randausbildungen.

To plan the described formation of the building according to invention allowed it this free, whereby also the individual parts of the building (inner walls, outer walls, decks and roof) already in the movement, in that the plates (z. B. the particle boards) manufactured will become, corresponding dimensioned made and then immediate on the construction site transported will become. So no more are cut or side dressing work required on the construction site, but it is sufficient to build the building up from prefabricated Innen-und outer walls as well as Decken-und parts of roofs this in particular, if the individual parts of the erfindungsgemässen building also at its edges, where required processed z. B. are profile-milled.

Soferne a sufficient delivery of moisture ensured received in the plates is not, because z. B. Vapor barriers provided are, exist the possibility to exhaust this moisture by the cavities by these sufficient, z. B. by an intended heating of the house by these, ventilated become.

Other details and features of the building according to invention result from the appended description of preferred Ausführungsformen bottom reference on the connected designs. Show: Fig. 1 an inner wall in oblique view, Fig. 2 an inner wall in the section, Fig. 3 an outer wall in oblique view, Fig. 4 an outer wall in the section, Fig. 5 a ceiling component or a roof member in oblique view, Fig. 6 the element of Fig. 5 in the section, Fig. 7. in oblique view the connection between outer wall and ceiling in oblique view, Fig. 8 the connection between wall and ceiling in the section, Fig. 9 a connection external wall roof in the Traufenbereich, Fig. 10 the connection between wall and roof in the Traufenbereich in the section, Fig. 11 roofridge training in oblique view, Fig. 12 the roofridge training of Fig. 11 in the section, Fig.

13 another embodiment of roofridge training in oblique view, Fig. 14 a section to Fig. 13, Fig. 15 an other embodiment of roofridge training in oblique view, Fig. 16 the roofridge training of Fig. 15 in the section, Fig. 17 roofridge training in the area of an inner wall in oblique view, Fig. 18 a section to Fig. 17, Fig. 19 one above the other inner walls arranged in the section an horizontal impact, Fig.

20 an oblique view of the horizontal impact between inner walls, Fig. 21 in the section an horizontal impact in the area of an outer wall, Fig. 22 the horizontal impact of outer walls in oblique view, Fig. 23 the connection of adjacent cover or roof members in oblique view, Fig. 24 a section to Fig. 23, Fig. 25 hitting a corner training between two inner walls in oblique view, Fig. 26 an horizontal cut by the hitting a corner training of Fig. 25, Fig. 27 the terminal

of an inner wall to an outer wall in oblique view, Fig. 28 an horizontal cut to Fig.

27, Fig. 29 another formation of a connection between inner wall and outer wall in oblique view with enlarged represented connecting element, Fig. 30 an horizontal cut to Fig. 29, Fig. 31 an edge connection between two outer walls in oblique view, Fig. 32 an horizontal cut hiezu, Fig. 33 another formation of an edge connection between two outer walls with enlarged represented connecting element, Fig. 34 an horizontal cut to Fig. 33, Fig. 35 an other formation of an edge connection between two outer walls in oblique view, Fig. 36 an horizontal cut to Fig. 35, Fig. 37 in oblique view a window in an outer wall, Fig. 38 an horizontal cut to Fig. 37, Fig. 39 another formation of a window in the area of an outer wall, Fig. 40 an horizontal cut hiezu and Fig. 41 a building according to invention, partial away-broken and in oblique view.

One in Fig. 1 and 2 (partly) represented inner wall 1 consists of two to each other parallel aligned particle boards 2 and 3 from each other arranged with distance, which can have the same or different starch. The particle boards 2 and 3 are with one another 4 connected over spacer elements. The spacer elements 4 can be strips or blocks. In Fig. 1 and 2 inner wall shown 1 becomes z. B. in the manufacturer with the required in each case dimensions and edge training manufactured, whereby the plates already become 2 and 3 with the spacer elements 4 in the manufacturer for example by glue connected. By the spacer elements 4 cavities 5 are present between the plates 2 and 3 of the inner wall 1. These cavities 5 can become used to accommodate in the inner wall 1 installations. These cavities 5 can be consulted also for a keeping at a moderate temperature buildings (heating and/or cool one), by becoming at corresponding Wärme-und/or refrigerators connected

The cavities 5 can be provided if necessary also with a filling, in order to adapt the insulating properties, in particular the noise control characteristics of the inner wall 1 to the respective requirements. In particular intended to a filling with such a material, which changes the natural frequency of the inner wall 1 in such a way, is that she possesses good noise control characteristics. The filling can become also so selected that the building according to invention at least partly possesses the own ones shanks of a massive construction.

One in Fig. 3 outer wall shown 10 possesses a particle board 12 and on its outside two immediate connected with one another, z on their the circumscribed space course-turned (interior) side. B. glued, particle boards 13. The double plate 13 is, - like that as this on the basis the Fig. 1 and 2 for the inner wall 1 described is, over spacer elements 14 with the inner patch 12 connected, so that the cavities 15 result. The outer wall 10 can become, like that as this for the inner wall 1 described is, in the manufacturer with the required dimensions and edge training manufactured.

In Fig. 5 and 6 represented, plate shaped element 20, which can become used for ceiling and/or roof, consists of for example two particle boards 22 and 23, which are 24 connected over spacer elements with one another. For Decken-und/or roof member 20 is favourable a larger distance between the plates 22 and 23 (particle boards), which can become achieved by

thicker spacer elements 24 (blocks or strips). In the illustrated embodiment the larger thickness of the spacer elements becomes 24 achieved by the fact that these in several layers (in the example: three layers) composite are. Between the spacer elements the 24 and the plates of 22 and 23 planned cavities 25 can, like this in Fig. 6 indicated is, by a thermal insulation 26 and/or a filling 27 filled its. Alternative ones can be consulted Decken- und/ or wall elements 20, like that as this for the outer walls 10 and the inner walls 1 described are, also for shifting installations and/ or for keeping at a moderate temperature the building from the described disk elements.

The Fig. 7 and 8 shows a connection between two one above the other arranged outer walls 10 and one with its edge between this arranged ceiling component 20. At the edge of the plates 22, 23 of the ceiling component 20 aligned openings are 28 provided, so that the cavities 15 in the external wall components 10 with the cavities 25 in the ceiling component 20 are located in connection, like this in Fig. 8 by arrows indicated is.

The Fig. 9 and 10 shows the Traufenausbildung between an outer wall 10 and a roof member 20, as on the basis the Fig. 5 and 6 described, formed is. The upper edges of the plates 12 and 13 of the outer wall 10 is, like this in Fig. 10 shown is, processed and the plate 22 is likewise as in Fig. 10 shown milled out, so that an anti-slip connection between outer wall 10 and roof member 20 is ensured. In the area of the upper ends of the cavities 15 in the outer wall 10 are in the plate 22 of the roof member 20 passage off now towards 28 provided, so that the cavities 15 in the outer wall 10 with the cavities 25 in the roof member 20 communicate, like this by the arrow in Fig. 10 illustrated is.

The Fig. 9 and 10 shows also that the outer wall becomes 10 so arranged that their double plate 13 points outward and the plate 12 to the space inside.

The Fig. 11 and 12 shows an embodiment for the formation of a roofridge between two roof members 20, whereby in the area of the roofridge a purlin is 30 arranged from solid wood. With in Fig.

11 illustrated embodiment is the purlin 30 arranged below the roof members and intervenes with their upper corners 31 in corresponding reaming in the bottom plates 22 of the roof members 20. The other the purlin 30 with its inclined surfaces planned above 32 rests against the upper edge regions of the plates 22 of the roof members 20. Like that a safe support of the roof members is 20 in the roofridge range given.

The Fig. 13 and 14 shows another type of the formation of a roofridge with purlin 30. With this embodiment the purlin 30 up to the top of the roof members 20 reaches through and is the corresponding above course of the alignment of the roof members 20 bevelled. The purlin 30 seizes with two shoulders 31 in corresponding reaming in the bottom plates 22 of

the roof members 20, so that a safe support of the roof members is 20 in the roofridge range given.

The Fig. 15 and 16 shows a third alternative for the formation of a roofridge, which is intended for a roof construction with smaller loads which can be expected. With this formation the bottom plates attach 22 of the roof members 20, which carries formed back opposite the roofridge-lateral edges of the top plates 23 of the roof members 20 is, at the side surfaces of the purlin 30.

If in the roofridge range of a roof gebieten from two roof members 20 an inner wall is 1 provided, the roofridge can, like in the Fig.

17 and 18 shown, formed its. The bottom plates attach 22 of the roof members 20 at the upper horizontal edges of the plates 2 and 3 of the inner wall 1, so that the cavities 5 in the inner wall 1 with the cavities 25 in the roof members 20 communicate.

If during establishing a building according to the invention becomes higher inner walls 1 required, single inner walls 1 can as in Fig 19 and 20 shown bottom training of an horizontal shock other set become. It is preferred, if the spacer elements are 14 formed extended at the bottom edge of the upper inner wall 1, thus over the bottom edge of the inner wall 1 manages, and which upper ends of the spacer elements 14 ' between the plates 2 and 3 of the lower inner wall 1 corresponding are carried back, so that a positive connection is in the area of the horizontal shock between the inner walls 1 ensured, without the cavities 5 are in the inner walls 1 interrupted.

Fig. 21 and 22 shows a similar formation of an horizontal shock between one above the other arranged outer walls 10, whereby not only the spacer elements manage here 14, but also one of the two plates 13 at the bottom edge of the outer wall 10 and are accordingly carried back at the upper edge of the lower outer wall 10, so that a positive connection between outer walls is 120 also here in the area of an horizontal shock formed, without the cavities are 125 interrupted.

With in Fig. 23 illustrated embodiment for a connection of next to each other arranged cover or roof members 20 the elements in the area of their together-pushing edges in the cross section seen hook-like profiled, so that a hook-crease-like connection between adjacent cover or roof members 20 results. In order to secure the connection, connecting bolts can be pivoted 8 and/or it are one in Fig in the area of the hook crease. 24 suggested glueing provided. Fig. 24 shows also that in area underside shock between adjacent cover or roof members 20 reaming 28 provided is, which by cover 29, for example in form one plastic or Holzstreifens, filled is, so that the butt joint, in particular after the cover is 29 verse lease ELT, is ago no longer more visible from downside. It is apparent that the hook-crease-like formation between adjacent cover or roof members 20 including the spacer elements 14, at

least the formed continuous preferred in this case in the edge region is (leistenförmig) made, in order to reach a required strength.

Additional to the connection by screws 8 the seamed joint can become also through glues secured.

The Fig. 25 and 26 shows an edge connection between inner walls 1 together-pushing in the angle. In the area of the together-pushing edges the inner plates 3 are carried back opposite the outer plates 2 of the inner walls 1, so that itself in Fig. results in 26 arrangement shown, whereby the possibility exists to secure the edge connection too glue and/or by screws 8.

With into the Fig. 27 and 28 terminal shown of an inner wall 1 to an outer wall 10 is in the terminal portion a square timber 40 provided, which is 10 connected with screws 41 with the outer wall. The square timber 40 intervenes between the plates 2 and 3 of the inner wall 1, whereby the possibility exists, the inner surfaces of the plates 2 and 3 with corresponding reaming to provide. Secured one becomes the connection between square timber 40 and inner wall 2 by screws 42 and/or a gluing. In the area of both interior corners reaming are 44.45 provided, which take up for example a plastic angle (not shown), verse lease ELT become in the angle range between the outer wall 10 and the inner wall 1. Like that is ensured that also, if wood works in the terminal portion between outer wall 10 and inner wall 1 no joints can develop.

The Fig. 29 and 30 shows an alternative Ausbidung of the terminal of an inner wall 1 at an outer wall 10. Hiezu are on the one hand existing at the plate 12 of the outer wall 10 and on the other hand at the edge-lateral spacer element 4 of the inner wall 1, for example from metal, hook 50 (see. Fig. 29) screwed, so that a positive connection between inner wall 1 and outer wall 10 can become manufactured by hooking the inner wall 1 from the top, thus by a movement downward.

With that. in Fig. 31 and 32 illustrated example for an edge connection between two outer walls together-pushing in the angle is carried back the plates 12 opposite the two-part plate 13, so that itself in Fig. 32 edge connection shown results in, with which the plates 13 of the obtuse push outer wall 10 to the edge of the plates 13 of the other outer wall 10. The inner plate 12 outer wall of the 10 pushes obtuse to the inner surface of the inner plate 12 of the other outer wall, what latter at the inner plate 13 of the double plate 13 of the other outer wall 10 lies close. In the area of the together fitting disk edges a glued connection 9 and additional or an alternative connection can be by screws 8 provided.

Fig. an embodiment for an edge connection between two outer walls 10, those points 33 to the use of the retaining claws 50, like it also on the basis the Fig. 29 and 30 for the terminal of an inner wall 10 1 to an outer wall 10 described is, manufactured is.

The Fig. 35 and 36 shows an edge connection between two outer walls 10, those opposite from Fig. 31,32 to that extent modified is, when the double plates 13 of the outer walls are 10 edge-laterally stepped formed and the inner plate 12 of the 10 rests to outer wall against a spacer element 14 of the other outer wall 10. Also here additional or alternative to glued connections 9 screws can be 8 provided, in order to secure the edge connection between the outer walls 10.

The Fig. 37 and 38 shows the formation one inward off nenden window 60 in a corresponding cutout in an outer wall 10. It is in particular from Fig. 38 more recognizable the fact that the window stick 61 with the formed outer plate 13 of the double plate of the outer wall projected in the area of the window opening is 10 connected, so that no stop bars are necessary, since the corresponding formation ent through speaking milling of the plates 13 with manufacturing the outer wall 10 and the window opening in this manufactured can become.

Corresponding applies to the formation of an inward openable window in accordance with the Fig. 39 and 40. No stop bar is necessary also here, since the window stick 61 is more immediate 12 connected with the formed inner plate projected in the area of the window opening in the outer wall 10.

Fig. manufactured a according to invention building shows 41 out before on the basis the Fig. 1 to 40 described inner walls 1, outer walls 10, ceiling components 20 and roof members 20. It is apparent that the inner walls are 1 continuous formed integral in horizontal direction. The outer walls 10 go over the whole length and width of the building from Fig. 41 integral through and are only added for reaching the necessary height of horizontal, whereby the horizontal impact as in the Fig. 21 and 22 shown, formed to be can do. The formation of the roofridge in combination with the purlin 30 planned there can, as this before on the basis the Fig. 11 to 16 described is, formed its. In the Traufenbereich thus, where roof members attach 20 to external wall components 10, it can for example on the basis the Fig. 9 and 10 described formation provided its.


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Claims:

1. Building, whereby in each case the outer walls (10), the inner walls (1), the ceiling plates (20) and/or the roof patches (20) of timber material plates consist, which exhibit at least an inner patch (2,12,22) and at least an outer plate (3,13,23), which are by spacer elements (4,14,24) from each other in the distance held and connected with one another, whereby between Innen-und outer plates (2,3; 12,13 ; 22,23) of the plates (of 1,10,20) cavities (5,15,25) provided is, characterised in that those the inner walls (1), the outer walls (10), which Decken-und/or the roof members (20) formed plates (1,10,20) at least in a direction integral continuous formed are, and that the plates (1,10,20) are in the required in each case dimensions and with the required edge training prefabricated.

2. Building according to claim 1, characterised in that Innen-und outer plates (2,3; 12, 13 ; 22,23) of the plates (1,10,20) particle boards is.

3. Building according to claim 2, characterised in that the wood chips Innen-und/or outer plates (2,3; 12,13 ; 22,23) several, preferably three, layers out in different direction oriented wood chips exhibits, or are einlagig, and essentially in the same direction oriented wood chips exhibit.

4. Buildings according to claim 1, characterised in that the spacer elements (4,14,24) strips are.

▲ top 5. Buildings according to claim 1, characterised in that the spacer elements (of 4,14,24) blocks are.

6. Buildings after one of the claims 1 to 5, characterised in that in the cavities (5,15,25), intended in the plates (1,10,20), installations arranged are.

7. Building after one of the claims 1 to 6, characterised in that the cavities (5,15,25) in the plates (1, 10,20) to an heater, z. B. warm air or hot water heating connected are.

8. Buildings after one of the claims 1 to 7, characterised in that the cavities (5,15,25) of the plates (1,10,20) to an air conditioner connected are.

9. Building after one of the claims 1 to 8, thus gekenn draws that the cavities (5,15,25) in external wall plates (10), inner wall plates (1), ceiling plates (20) and/or roof patches (20) communicate with one another (Fig. 8,10).

10. Building after one of the claims 1 to 9, thus gekenn draws that the inner walls (1) consist of plates, which are in horizontal direction continuous formed.

11. Buildings after one of the claims 1 to 10, characterised in that the outer walls (10) of plates consist, which are in horizontal direction continuous formed.

12. Buildings after one of the claims 1 to 11, characterised in that the ceiling components (20) plates are, which are continuous formed toward the width or the length of the building.

13. Building after one of the claims 1 to 12, characterised in that the roof a sub-construction exhibits, which is out formed toward the slope of the roof continuous plates (20).

14. Buildings after one of the claims 1 to 13, characterised in that of outer walls (10) from plates formed are, those with horizontal shock one above the other arranged are (Fig. 21).

15. Buildings after one of the claims 1 to 14, characterised in that of inner walls (1) of plates consist, which are arranged with horizontal shock one above the other (Fig. 19).

16. Buildings after one of the claims 1 to 15, characterised in that ceilings of the building from cover plates (20) exist, those also in Längs-oder transversal direction of the building aligned shocks are adjacent (Fig. 24).

17. Building after one of the claims 1 to 16, characterised in that the sub-construction of the roof from plates (20) exists, which are adjacent also toward the inclination of the roof aligned shocks.

18. Buildings after one of the claims 1 to 17, characterised in that as inner wall (1) the certain cuffs from two and plates (2,3), from each other connected by spacer elements (4), held in the distance, exist with one another, whereby are provided between the spacer elements (4) and the plates (2,3) cavities (5) (Fig. 1,2).

19. Building after one of the claims 1 to 18, thus gekenn 'draws that for Innen-und/or outer walls (10) certain plates on a side a plate (12) and on the other side two immediate connected with one another plates (13), which laminar together-lie possess, whereby the single plate (12) and the double plate (13) are held by spacer elements (14) connected with one another and on distance (Fig. 3, 4).

20. Building after one of the claims 1 to 19, thus gekenn draws that are certain as decks and/or roof of the building plates (20), which cover two plates (22,23), those by spacer elements (24) with one another on distance connected are and that the spacer elements (24) are thicker as the spacer elements (4) of the plates certain for inner walls (1) (Fig. 5,6).

21. Buildings after one of the claims 1 to 20, characterised in that in the terminal portion of a ceiling plate (20) with an outer wall (10) in the edge region of the ceiling plate (20) openings (28) provided are, which connect the cavities (25) in the ceiling plate (20) with the cavities (15) in the outer wall (10) (Fig. 7,8).

22. Buildings after one of the claims 1 to 21, characterised in that in the trust-communication control unit-rich between an outer wall (10) and the roof (20) in a plate (22) of the roof member (20) openings (28) provided are, which connect the cavities (15) in the outer wall (10) with the cavities (25) in roof members (20) (Fig. 9,10).

23. Buildings after one of the claims 1 to 22, characterised in that within the roofridge range the adjacent, horizontal edges of the ceiling plates (20) by a purlin (30) supported are (Fig. 12,14,16).

24. Building according to claim 23, characterised in that the inner plates (22) of the ceiling components (20) a profile exhibit, which is against-same formed to the profile in the upper portion of the purlin (30) (Fig. 12, 14).

25. Building after one of the claims 1 to 24, thus gekenn draws that in the area of the horizontal shock of inner walls (1) and/or outer walls (10) the spacer elements (4,14) at the bottom edge manage the inner wall (1) and/or the outer wall (10), like actual known, and the spacer elements (4) at the upper edge of the inner wall (1) and/or the outer wall (10) at least around the projection of the spacer elements (4,14) formed are backjumping (Fig. 19,21).

26. Building according to claim 25, characterised in that in the area of an horizontal shock arranged inner walls (1) and/or outer walls (10) one of the plates (13) of the double plate at the outside of the outer wall (10) and/or inner wall (1) over the bottom edge of the outer wall (10) or inner wall (1) projected and at the upper edge of the lower outer wall (10) or inner wall (1) one above the other formed is backjumping (Fig. 21).

27. Buildings after one of the claims 1 to 26, characterised in that in the area of adjacent

edges as decks and/or roof certain plates (20), like actual known, against-same profiled formed are (Fig. 23, 24). t 28. Buildings according to claim 27, characterised in that the adjacent edges of as ceiling and/or roof certain plates (20) hook crease-like formed are (Fig. 23,24).

29. Building after one of the claims 1 to 28, thus gekenn draws that the cavities (5,15,25) are at least partial in the plates (1, 10, 20) filled with material.